Mathematics ECAT Pre Engineering Chapter 19 Integration Online Test

Sr	Questions	Answers Choice
1	If the lower limit of an integral is a constant and the upper limit is a variable, then the integral is a	A. Constant function B. Variable value C. Function of upper limit D. All
2	Question Image	
3	Question Image	A. a sec(ax + b) + c B. - a sec(ax + b) + c
4	∛8.6 is approximately equal to	A. 2.488 B. 2.48 C. 2.0488 D. 2.05
5	∫f(x) is known as:	A. Definite itegral B. Indefinite integral C. Fixed integral D. Multiple integral
6	The differential equations of all conis whose axes coincide with the co-ordinate axis is	
7	Question Image	
8	The area under the curve y = $1/x^2$ between x = 1 and x =4 is:	A. -25 B. 0.75 C. -0.35 D. -10
9	The approximate percentage increase in the volume of a cube if the length of its each edge changes from 5 to 5.02 is	A. 1.2% B. 1.5% C. 0.16% D. 100.16%
10	Question Image	A. a cot(ax + b) + c B. - a cot(ax + b) + c
11	∫sin(ax+b) dx is equal to:	A. 1/2a cos (ax + b) B. -1/a cos (ax +b) C. 1/a cos (ax +b) D. 1/a ln (ax + b)
12	Question Image	
13	Question Image	B. 6x + 2 + c C. 6x + x²+ c D. 6x³+ x²+ x
14	Question Image	A. sec 3x + c B. - cosec 3x + c
15	Question Image	A. a tan(ax + b) + c B. - a tan(ax + b) + c
16	The solution of differential equation:	A. dy/dx+y/x = x²is : B. 4xy = x⁴+ c C. 4x = x⁴= c D. 4 y = x⁴+ c E. 4x=4x³ + c
17	Question Image	
18	The general solution of the differential equation x dy / dx = 1 + y is:	A. 2 B. 1 C. 3 D. None
19	Question Image	
20	Question Image	
		A. 0.4cm

21	The approximate increase in the area of a circular disc if its diameter increased form 44cm to 44.4cm is	B. 8.8πcm C. 17.6 πcm D. 35.2πcm
22	Question Image	B. ln(x²- x + 1) + c D. ln(2x - 1) + c
23	Question Image	
24	Question Image	A. Always negative B. Zero C. Always positive D. Infinity
25	Question Image	A. - cot 4x + c B. cot 4x + c C. tan 4x + c D. - tan 4x + c
26	Question Image	
27	The area enclosed between the graph $y = x^2 - 4x$ and the x- axis is:	A. 20/3 B. 41/3 C. 32/3 D. 25/3
28	Question Image	A. e^x+ c B. e^{-x}+ c C. x e^x+ c D. not possible
29	Question Image	
30	Question Image	B. a f(x) + c C. f(x) + a
31	Question Image	
32	Question Image	
33	Question Image	A. 1 B. 2 C. 3 D. 4
34	Question Image	
35	Question Image	B. sin 2x + c C. -sin 2x + c
36	Question Image	A. cos 2x + c B. - cos 2x + c C. tan 2x + c D. cot 2x + c
37	The area between the x-axis the curve y =4x-x2 is :	A. 32/2 B. 15 C. 18 D. 21
38	Question Image	
39	Question Image	A. sec 5x + c B. - sec 5x + c
40	∫ x cos dx is equal to :	A. x cos x + sin x B. cos x + x sin x C. x cos x + x sin x D. x sin x + cos x
41	Question Image	
42	Te order of the differential equation of all conics whose axes coincide with the axes of co-ordinates is	A. 2 B. 3 C. 4 D. 1
43	The number of arbitrary constants in the general solution of a differential equation is equal to the different equation	A. Order B. Degree C. Variables D. All are correct
44	Question Image	A. 2x - 3x + c C. x²- 3x + c
45	Question Image	A. cosec x + c B. -cosec x + c

45	Question Image	C. -sec x + c D. sec x + c
46	An integral of 1/x dx is:	A. 1/x² B. 1/-x² C. 1/lnx D. lnx
47	Question Image	
48	Question Image	
49	Question Image	
50	Question Image	
51	Question Image	
52	Question Image	
53	Question Image	A. 2, 3 B. 3, 3 C. 2, 6 D. 2, 4
54	Question Image	
55	Question Image	B. ln(x²- x + 1) ⁴+ c
56	Question Image	A. cos x + c B. -sin x + c C. -cos x + c D. sin x + c
57	Question Image	A. 0 B. 1 C. 2 D. 4
58	Question Image	D. none of these
59	Question Image	A. 5x^{4 + c} B. 1/6 x⁶+ c C. 5x²+ c D. 1/5 x⁶+ c
60	Question Image	A. 1 B. 2 C. 3 D. 4
61	Question Image	B. a^xln a + c C. a^x+ c D. x a^x+ c
62	Question Image	
63	Question Image	A. a cosec(ax + b) + c B. - a cosec(ax + b) + c
64	Question Image	
65	Question Image	
66	Question Image	A. X = 100 sinθ B. X = 10 sinθ C. X = 100 secθ D. None of these
67	The area between the x-axis and the curve $y = x^2 + 1$ from x = 1 to 2 is:	A. 15/6 B. 15/4 C. 10/4

		D. 10/3
68	∫x/Sin^2 x dx is equal to:	A. x cot x + ln|sin x| B. -x cot x - ln|sin x| C. x cot x - ln|sin x| D. x. tan x- ln|sec x|
69	Question Image	
70	Question Image	
71	The differential equation of all st. lines which are at a constant distance to form the origin is	
72	Question Image	A. A variable B. A constant C. 0 D. None of these
73	Archimedes approximate the function by horizontal function and the area under f by the sum of small	A. Parallelograms B. Squares C. Retangles D. Polygons
74	Question Image	
75	Question Image	
76	Question Image	
77	Question Image	
78	Question Image	
79	The arbitrary constants involving in the solution can be determined by the given conditions. Such conditions are called	A. Boundaries B. Variable separable C. Initial values D. None
80	The set of all antiderivaties of f(= ∫f(x)dx) is the	A. Definite integral B. Indefinite integral C. Integral D. Area
81	Which of the following integrals can be evaluated	
82	∫x sin xdx is equal to:	A. sin x/x + cos x B. sin x - cos x/x C. x cos x + sin x D. - x cos x + sin x
83	The function ø(x) is ananti derivativeof function f (x),x∈Df if	A. ø′(x) =∫f(x)dx B. ø(x) =∫f(x)dx C. ø′(x) =f(x) D. ø(x) =∫′(x)dx
84	Question Image	
85	The area bounded by y = x (x2 - 4) and below x - axis is	A. 4 B. 0 C. -4 D. 8
86	Question Image	
87	The differential equation representing the family of curves y = A cos (x + B), where A, B are parameters, is	
88	Question Image	
89	Question Image	C. x²+ 2x + c D. (x²+ 2x -1) ⁴+ c
90	Question Image	
91	Question Image	
92	Question Image	
93	Question Image	A. 4(x³- 3x²)³+ c B. 3x²- 6x + c
94	Question Image	

95	Question Image	
96	Question Image	
97	Question Image	A. 1 + tan²x + c B. tan x + c C. -tan x + c D. cot x + c
98	Question Image	B. tan 3x + c C. cot 3x + c D. - cot 3x + c
99	Question Image	A. cosec x + c B. -cosec x + c C. -sec x + c D. sec x + c
100	Question Image	
101	Question Image	
102	The process of finding a function whose derivative is given is called a	A. Differentiation B. Integration C. Differential D. None
103	Question Image	A. cot x + c B. tan x + c C. -cot x + c D. -tan x + c
104	Question Image	
105	An equation in which at least one term contains dy/dx, d^2 y /dx^2etc, is called.	A. Differential equation B. Initial condition C. General solution D. Singular equation
106	Question Image	A. a cos(ax + b) + c B. - a cos(ax + b) + c
107	Question Image	
108	Question Image	
109	∫Sec^2 (ax + b) dx is equal to:	A. tan² (ax + b) B. 1/a tan² (ax + b) C. 1/atan (ax +b) D. tan (ax + b)
110	Question Image	
111	Question Image	
112	Question Image	C. ln f(x) + c D. f(x) - c
113	Question Image	A. a sin(ax + b) + c B. - a sin(ax + b) + c
114	Question Image	
115	Question Image	
116	Question Image	A. π B. π/6 C. -π/2 D. 2<span style="color: rgb(34, 34, 34); font-family: "Times New Roman"; font-size: 24px; text-align: center; background-color:

		rgb(255, 255, 224);">π
117	Question Image	A. y + 1 = Ae^x B. y + 1 = Axe^x C. xe^x= C D. y + xe^x= C
118	Question Image	
119	f(x)g(x)- ∫g(x) f′(x) dx is equal to	A. ∫f(x)g′(x)dx B. ∫f′(x)g(x)dx C. ∫f′(x)g(x)′dx D. ∫f(x)g(x)dx
120	Question Image	A. (x³- 3x²)⁸+ c D. 3x²- 6x + c
121	Question Image	A. sin x + c B. -sin x + c C. cos x + c D. -cos x + c
122	Question Image	
123	The integral of $3x^5 dx$ is:	A. 15 x⁴ B. x⁶/2 C. 1/6x⁵ D. x⁵/ln3
124	Question Image	A. Y = -x log x -x + c B. Y = x log x + x C. Y = x log x - x + c D. None of these
125	Question Image	A. x³- x²+ x + c B. 6x - 2 + c C. x³- 2x + c
126	Question Image	A. cos 3x + c B. - cos 3x + c
127	Question Image	A. 2x + 3 B. x²+ 3 + c
128	Which of the following integrals can be evaluated	
129	Question Image	B. x⁻²+ c D. not possible
130	Question Image	A. 6x - 2 + c B. x³- x²+ x + c C. 6x - x²+ c D. 6x³- x²+ c
131	If the graph of f is entirely below the x-axis, then the value of definite integral is	A. = 0 B. < 0 C. > 0 D. None
132	Question Image	
133	Question Image	